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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,520	08/29/2003	David P. Helm	CM05114H	8879
20576 7590 07/17/2007 MILLER JOHNSON SNELL CUMMISKEY, PLC 800 CALDER PLAZA BUILDING 250 MONROE AVE N W GRAND RAPIDS, MI 49503-2250			EXAMINER HASHEM, LISA	
			ART UNIT 2614	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/651,520	<b>Applicant(s)</b> HELM ET AL.	
	<b>Examiner</b> Lisa Hashem	<b>Art Unit</b> 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2-28-07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 recites the limitations "the time-to-live (TTL) field" and "the capacity of the at least one buffer". There is insufficient antecedent basis for these limitations in the claim.
3. Claim 4 recites the limitations "the speed" and "the capacity of the at least one buffer". There is insufficient antecedent basis for these limitations in the claim.
4. Claim 5 recites the limitation "the originating link". There is insufficient antecedent basis for this limitation in the claim.
5. Claim 7 recites the limitation "the at least one congestion value". There is insufficient antecedent basis for this limitation in the claim.
6. Claim 8 recites the limitations "the communications speed" and "the capacity of the at least one buffer". There is insufficient antecedent basis for these limitations in the claim.
7. Claim 10 recites the limitations "the size of a jitter buffer" and " the time-to-live (TTL) field ". There is insufficient antecedent basis for these limitations in the claim.
8. Claim 14 recites the limitation "the amount of transmission delay". There is insufficient antecedent basis for this limitation in the claim.
9. Claim 18 recites the limitations "the size of a jitter buffer", "the congestion of the link", and "the effect of receipt of non-periodic VoIP packets". There is insufficient antecedent basis for these limitations in the claim.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 4-6, 8, 14-16, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. Appl. Publ. 2003/0086425 by Bearden et al, hereinafter Bearden.

Regarding claim 1, Bearden discloses a packet switched communications system having a dynamic voice jitter buffer (section 0224) for use with voice over Internet protocol (VoIP) packets comprising: a source transmitting at least one VoIP packet;  
at least one router for routing the VoIP packet to a specified destination;  
a destination for receiving the at least one VoIP packet (section 0024); and  
wherein the VoIP packet operates to convey congestion information regarding the packet switched communications system to at least one buffer located at the destination (sections: 0224-0225).

Regarding claim 4, a packet switched communications system as in claim 1, wherein Bearden further discloses the VoIP packet conveys congestion information comprising the steps of:

determining the speed upon which the VoIP packet has been received at the at least one router;

setting at least one field in the VoIP packet to indicate if the packet has traversed at least

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one previous router below a predetermined speed; and  
adjusting the capacity of at least one buffer at the destination based upon recognition of the at least one field in order to mitigate non-periodic receipt of incoming VoIP packets at the destination (sections: 0026-0027; 0044; 0048; 0261).

Regarding claim 5, a packet switched communications system as in claim 4, wherein Bearden further discloses further including the step of:  
setting the least one field within the VoIP packet with a congestion value based upon the speed of the originating link (sections: 0026; 0084; 0224-0225; 0235).

Regarding claim 6, a packet switch communications systems claim 4, wherein Bearden further discloses further including the step of:  
setting the least one field within the VoIP packet with a congestion value based upon the speed of the destination link (sections: 0026; 0084; 0224-0225; 0235).

Regarding claim 8, a packet switched communications system as in claim 1, wherein Bearden further discloses the VoIP packet conveys congestion information comprising the steps of:  
determining at the at least one router if a received packet has encountered at least one congested router;  
setting at least one field in the VoIP packet indicating if the communications speed of a destination link is below a predetermined threshold; and  
adjusting the capacity of at least one buffer at the destination based upon recognition of the at least one field in order to mitigate non-periodic receipt of incoming VoIP packets at the destination (sections: 0026-0027; 0084; 0224-0225; 0235).

Regarding claim 14, Bearden discloses a method for adjusting the size of a jitter buffer (section 0224) for use with a packet network transmitting voice over Interact protocol (VoIP) packets based upon transmission path delay comprising the steps of:

determining the amount of transmission delay through a transmission path that a VoIP packet has encountered upon receipt by at least one router in the packet network (section 0024-0027);

setting a field within the VoIP packet when the transmission rate for a link used for the VoIP is below a predetermined threshold;

recognizing the field at a destination of the VoIP packet; and

adjusting the size of a jitter buffer based upon recognition of the field in order to mitigate the effect of receipt of non-periodic VoIP packets at the destination (section 0084; 0224-0225; 0235; 0261).

Regarding claim 15, a method for adjusting the size of a jitter buffer as in claim 14, wherein Bearden further discloses the jitter buffer is located at the destination (sections 0084; 0224-0225; 0261).

Regarding claim 16, a method for adjusting the size of a jitter buffer as in claim 14, wherein Bearden further discloses further including the steps of:

setting the field using a numeric value based upon the amount of transmission path delay;

and mapping the numeric value into a minimal jitter buffer size required for that amount of delay (section 0225; 0261).

Regarding claim 18, Bearden discloses a method for adjusting the size of a jitter buffer (section 0224) for use with a packet network transmitting voice over Interact protocol (VoIP) packets based upon transmission path delay comprising the steps of:

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determining the amount of transmission delay through a transmission path that a VoIP packet has encountered upon receipt by at least one router in the packet network (section 0024-0027);  
setting a field within the VoIP packet when the congestion of the link exceeds a predetermined threshold;  
recognizing the field at a destination of the VoIP packet; and  
adjusting the size of a jitter buffer based upon recognition of the field in order to mitigate the effect of receipt of non-periodic VoIP packets at the destination (section 0084; 0224-0225; 0235; 0261).

Regarding claim 19, a method for adjusting the size of a jitter buffer as in claim 18, wherein Bearden further discloses the jitter buffer is located at the destination (sections 0084; 0224-0225; 0261).

Regarding claim 20, a method for adjusting the size of a jitter buffer as in claim 18, wherein Bearden further discloses further including the steps of:  
setting the field using a numeric value based upon the link congestion;  
and mapping the numeric value into a minimal jitter buffer size required for that amount of delay (section 0225; 0261).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden.

Regarding claim 2, a packet switched communications system as in claim 1, wherein Bearden further discloses the VoIP packet conveys congestion information comprising the steps of:

setting the time-to-live (TTL) field in the VoIP packet to a predetermined value;

decrementing the TTL value by one count as it traverses each respective router in the packet switched communications system;

calculating the number of routers the VoIP packet has passed through based on a final TTL value determined at the destination (section 0027); and

adjusting the capacity of the at least one buffer at the destination based order to mitigate non-periodic receipt of incoming VoIP packets at the destination (section 0261).

Although, Bearden does not adjust the capacity of the at least one buffer at the destination based on the final TTL value in order to mitigate non-periodic receipt of incoming VoIP packets at the destination (section 0261).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the system of Bearden to include adjust the capacity of the at least one buffer at the destination based on the final TTL value in order to mitigate non-periodic receipt of



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incoming VoIP packets at the destination. One of ordinary skill in the art would have been lead to make include such modification to adjust the buffer at the destination based on the final TTL value of the VoIP packets to determine Quality of Service (QoS) requirements for successful transmission of data packets from a source to a destination.

14. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden as applied to claim 2, and in further view of U.S. Pat. Appl. Publ. 20020015387 by Houh (submitted by Applicant in IDS filed on 2-8-07).

Regarding claim 3, a packet switched communications system as in claim 2, wherein Bearden does not disclose further including the step of:

selecting a first, second or third capacity of the at least one buffer based upon the final TTL value.

Houh discloses a packet switched communications system (section 0035) having a dynamic voice jitter buffer (section 0005) for use with voice over Internet protocol (VoIP) packets comprising: a source transmitting at least one VoIP packet (section 0038-0039; 0046); at least one router for routing the VoIP packet to a specified destination (section 0041); a destination for receiving the at least one VoIP packet (section 0041); and wherein the VoIP packet operates to convey congestion information regarding the packet switched communications system to at least one buffer located at the destination (sections: 0005; 0044; 0046).

Houh further discloses selecting a first, second or third capacity of the at least one buffer based upon a value (sections: 0072; 0075)

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the system of Bearden to include selecting a first, second or third capacity of the at least one buffer based upon the final TTL value as taught by Houh. One of ordinary skill in the art would have been lead to make such a modification to utilize a value determined by VoIP packets to determine Quality of Service (Quality of Service (QoS)) requirements for successful transmission of data packets from a source to a destination.

15. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden as applied to claim 1, and in further view of Houh.

Regarding claim 7, a packet switched communications system as in claim 1, wherein Bearden does not disclose further including the step of:  
selecting a first, second or third capacity of the at least one congestion value.

Houh discloses a packet switched communications system (section 0035) having a dynamic voice jitter buffer (section 0005) for use with voice over Internet protocol (VoIP) packets comprising: a source transmitting at least one VoIP packet (section 0038-0039; 0046); at least one router for routing the VoIP packet to a specified destination (section 0041); a destination for receiving the at least one VoIP packet (section 0041); and wherein the VoIP packet operates to convey congestion information regarding the packet switched communications system to at least one buffer located at the destination (sections: 0005; 0044; 0046).

Houh further discloses selecting a first, second or third capacity of the at least one buffer based upon a congestion value (sections: 0072; 0075)

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the system of Bearden to include selecting a first, second or third capacity of the at least one buffer based upon a congestion value as taught by Houh. One of ordinary skill in the art would have been lead to make such a modification to utilize a value determined by VoIP packets to determine Quality of Service (Quality of Service (QoS)) requirements for successful transmission of data packets from a source to a destination.

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden as applied to claim 8, and in further view of Houh.

Regarding claim 9, a packet switched communications system as in claim 8, wherein Bearden does not disclose further including the step of:  
selecting a first, second or third capacity of the at least one buffer based upon a value set within the at least one field.

Houh discloses a packet switched communications system (section 0035) having a dynamic voice jitter buffer (section 0005) for use with voice over Internet protocol (VoIP) packets comprising: a source transmitting at least one VoIP packet (section 0038-0039; 0046); at least one router for routing the VoIP packet to a specified destination (section 0041); a destination for receiving the at least one VoIP packet (section 0041); and wherein the VoIP packet operates to convey congestion information regarding the packet switched communications system to at least one buffer located at the destination (sections: 0005; 0044; 0046).

Houh further discloses selecting a first, second or third capacity of the at least one buffer based upon a value set within the at least one field (sections: 0072; 0075)

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the system of Bearden to include selecting a first, second or third capacity of the at least one buffer based upon a value set within the at least one field as taught by Houh. One of ordinary skill in the art would have been lead to make such a modification to utilize a value determined by VoIP packets to determine Quality of Service (Quality of Service (QoS)) requirements for successful transmission of data packets from a source to a destination.

17. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden.

Regarding claim 10, please see the rejections to claims 1 and 2 above.

Regarding claim 11, a method for adjusting the size of a jitter buffer, as in claim 10: wherein Bearden further discloses the jitter buffer is located at the destination (sections 0084; 0224-0225; 0261).

Regarding claim 12, a method for adjusting the size of a jitter buffer, as in claim 10 wherein Bearden further discloses further includes the steps of:  
comparing the predetermined value of the TTL field with the value read at the destination to produce a compared value; and  
mapping the compared value to a predetermined jitter buffer capacity to provide a substantially continuous flow of VoIP packets from jitter buffer (sections 0026-0027; 0084; 0224-0225; 0261).

18. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden as applied to claim 12, and in further view of Houh.

Regarding claim 13, a method for adjusting the size of a jitter buffer as in claim 12, wherein Bearden does not disclose further comprising the step of:

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setting the capacity of the jitter buffer to either a first, second or third predetermined capacity based upon the compared value.

Houh discloses a packet switched communications system (section 0035) having a dynamic voice jitter buffer (section 0005) for use with voice over Internet protocol (VoIP) packets comprising: a source transmitting at least one VoIP packet (section 0038-0039; 0046); at least one router for routing the VoIP packet to a specified destination (section 0041); a destination for receiving the at least one VoIP packet (section 0041); and wherein the VoIP packet operates to convey congestion information regarding the packet switched communications system to at least one buffer located at the destination (sections: 0005; 0044; 0046).

Houh further discloses setting the capacity of the jitter buffer to either a first, second or third predetermined capacity based upon the compared value (sections: 0072; 0075)

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the system of Bearden to include setting the capacity of the jitter buffer to either a first, second or third predetermined capacity based upon the compared value as taught by Houh. One of ordinary skill in the art would have been lead to make such a modification to utilize a value determined by VoIP packets to determine Quality of Service (QoS) requirements for successful transmission of data packets from a source to a destination.

19. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden as applied to claim 14, and in further view of Houh.

Regarding claim 17, a method for adjusting the size of a jitter buffer as in claim 14, wherein Bearden does not disclose further comprising the step of:

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adjusting the size of the jitter buffer to either a first, second or third capacity based upon the numeric value set within the field.

Houh discloses a packet switched communications system (section 0035) having a dynamic voice jitter buffer (section 0005) for use with voice over Internet protocol (VoIP) packets comprising: a source transmitting at least one VoIP packet (section 0038-0039; 0046); at least one router for routing the VoIP packet to a specified destination (section 0041); a destination for receiving the at least one VoIP packet (section 0041); and wherein the VoIP packet operates to convey congestion information regarding the packet switched communications system to at least one buffer located at the destination (sections: 0005; 0044; 0046).

Houh further discloses adjusting the size of the jitter buffer to either a first, second or third capacity based upon the numeric value set within the field (sections: 0072; 0075)

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the system of Bearden to include adjusting the size of the jitter buffer to either a first, second or third capacity based upon the numeric value set within the field as taught by Houh. One of ordinary skill in the art would have been lead to make such a modification to utilize a value determined by VoIP packets to determine Quality of Service (QoS) requirements for successful transmission of data packets from a source to a destination.

20. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bearden as applied to claim 18, and in further view of Houh.

Regarding claim 21, a method for adjusting the size of a jitter buffer as in claim 18, wherein Bearden does not disclose further comprising the step of:

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adjusting the size of the jitter buffer to either a first, second or third capacity based upon the numeric value set within the field.

Houh discloses a packet switched communications system (section 0035) having a dynamic voice jitter buffer (section 0005) for use with voice over Internet protocol (VoIP) packets comprising: a source transmitting at least one VoIP packet (section 0038-0039; 0046); at least one router for routing the VoIP packet to a specified destination (section 0041); a destination for receiving the at least one VoIP packet (section 0041); and wherein the VoIP packet operates to convey congestion information regarding the packet switched communications system to at least one buffer located at the destination (sections: 0005; 0044; 0046).

Houh further discloses adjusting the size of the jitter buffer to either a first, second or third capacity based upon the numeric value set within the field (sections: 0072; 0075).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the system of Bearden to include adjusting the size of the jitter buffer to either a first, second or third capacity based upon the numeric value set within the field as taught by Houh. One of ordinary skill in the art would have been lead to make such a modification to utilize a value determined by VoIP packets to determine Quality of Service (QoS) requirements for successful transmission of data packets from a source to a destination.

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form.

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22. Any response to this action should be mailed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Or faxed to:**

(571) 273-8300 (for formal communications intended for entry)

**Or call:**

(571) 272-2600 (for customer service assistance)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa Hashem whose telephone number is (571) 272-7542. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on (571) 272-7547. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.



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23. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

lh  
July 9, 2007

*Charles J. Haudrey*  
Primary Exam  
Art Unit 2614